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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/857,585 05/16/97 ABE

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IM62/0809

 EXAMINER

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PREISCH, N

ART UNIT	PAPER NUMBER
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1764 *AS***DATE MAILED:**

08/09/99

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

<b>Office Action Summary</b>	Application No. <b>08/857,585</b>	Applicant(s) <b>Abe et al.</b>
	Examiner <b>Nadine Preisich</b>	Group Art Unit <b>1764</b>



Responsive to communication(s) filed on Jun 21, 1999

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

#### Disposition of Claims

Claim(s) 3, 5, 6, 12, and 14 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

Claim(s) \_\_\_\_\_ is/are allowed.

Claim(s) 3, 5, 6, 12, and 14 is/are rejected.

Claim(s) \_\_\_\_\_ is/are objected to.

Claims \_\_\_\_\_ are subject to restriction or election requirement.

#### Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All  Some\*  None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

#### Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 1764

## **DETAILED ACTION**

### ***Claim Rejections - 35 U.S.C. § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3, 5, 6, 12 and 14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over the translation of Hei 2-56247 in view of Eberly, Jr. et al.(3,591,488).

In the pending application, applicants claim a composition comprising a high silica zeolite having a Si/Al ratio of not less than 40, and a heat resistant oxide, wherein the said heat resistant oxide is loaded with a noble metal. Applicants further claim an adsorbent comprising a honeycomb structure coated with a heat resistant oxide loaded with a noble metal.

The translation of Hei 2-56247 teaches a composition for automobile exhaust gas treatment comprising a zeolite and a heat resistant oxide in the form of alumina. The Hei 2-56247 translation also discloses that a noble metal in the form of Pt is loaded on alumina. For example,

Art Unit: 1764

see page 3, lines 7-13. The translation of Hei 2-56247 also discloses that the support is honeycomb shaped. In addition, the support is coated with a heat resistant oxide in the form of alumina. For example, see page 3, lines 6-7.

The translation succeeds in teaching applicants' claimed zeolite component and heat resistant oxide component, other than zeolite, loaded with a noble metal in the form of alumina loaded with Pt. Furthermore, Hei 2-56247 also succeeds in teaching applicants' honeycomb shaped support. In addition, the translation of Hei 2-56247 is considered to encompass applicants' alkali metal content of 0.1% by weight or less because "less" is considered to encompass 0%.

Several differences are noted between the applied art of translation of the Hei 2-56247 and applicants' claimed invention. The translation of Hei 2-56247 is silent about the Si/Al ratio in the zeolite. Furthermore, translation of Hei 2-56247 is silent about the specific structure of the honeycomb.

The reference of Eberly, Jr. et al.(3,591,488) is cited for the general teaching that it is known in the art that zeolites with that high silica/alumina ratios, such as 50, are desirable for high temperature conversions because they display increased thermal stability. For example, see column 2, lines 41-45 and column 5, lines 2-5.

Since it is desirable for compositions to be thermally stable for exhaust gas treatment process due to the high temperatures involved, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select a zeolite with a high silica/alumina ratio in

Art Unit: 1764

the exhaust gas composition disclosed by the translation of Hei 2-56247 because it is known in the art that zeolites with a high silica/alumina ratio display increased thermal stability.

Furthermore, applicants' limitations directed at the specific shape of the honeycomb composition are not considered to be patentable distinctions because such shapes are conventional in the art.

Therefore, applicants' claimed structures fail to patentably distinguish over the applied prior art.

#### *Response to Arguments*

Applicants' arguments filed 6-21-99 have been fully considered but they are not persuasive.

In response to the argument that the examiner does not acknowledge that there is no discussion of the silica/alumina ratio in the reference of Hei 2-56247, the examiner does acknowledge that the reference of Hei- 2-56247 does not disclose applicants' silica/alumina ratio. The office action mailed 2-22-99 in paper no.42 specifically states "The translation of Hei 2-56247 is silent about the Si/Al ratio". The secondary reference of Eberly, Jr. et al.(3,591,488) was specifically included in the rejection to address the deficiency of the primary reference with respect to the Si/Al ratio.

Art Unit: 1764

In response to applicants' arguments pertaining to the placement of the zeolite layer in the Hei 2-56247 reference, the fact that the reference of Hei 2-56247 does not describe the influence of water on the zeolites hydrocarbon absorption capacity, the fact that the reference of Eberly, Jr. et al.(3,591,488) does not describe the relationship of BET, Si/Al ratio and alkali metal content, applicants are arguing limitations which are not contained in the claims. In response to applicants' arguments that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e. the influence of water on the zeolites absorption capacity, the relationship of the BET, Si/Al relationship, etc.) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The examiner disagrees with applicants' argument that the disclosure of Eberly, Jr. et al.(3,591,488) does not lead one of ordinary skill in the art to select an Si/Al ratio of at least 40 for an adsorbent for hydrocarbons at the time of the cold start. Motivation for combining references results from the fact that the reference of Eberly, Jr. et al.(3,591,488) specifically discloses that "It has been found that for general catalytic or absorptive uses, the aluminosilicates having higher silica to alumina ratios will be preferred due to their higher stability....". For example, see column 2, lined 39-44. Since the composition of Hei 2-56247 is used for the catalytic purpose of treating exhaust gas, one would have been motivated to select a high silica zeolite such as that claimed by applicants. In addition, the reference of Eberly, Jr. et al. does not

Art Unit: 1764

limit the processes the high silica zeolite is used in. Since the reference broadly discloses that the high silica zeolite is useful in various hydrocarbon conversion processes without limiting its function , it is also considered to be useful in exhaust gas conversion, which is considered to be a type of hydrocarbon conversion. Applicants have not pointed to any teaching in the reference of Eberly, Jr. et al., that indicates that the high silica zeolite “can not” be used in an exhaust gas conversion.

***Claim Rejections - 35 U.S.C. § 103***

Claims 3, 5, 6, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the translation of Hei 2-56247 in view of Inoue et al.(5,223,236).

In the pending application, applicants claim a composition comprising a high silica zeolite having a Si/Al ratio of not less than 40, and a heat resistant oxide, wherein the said heat resistant oxide is loaded with a noble metal. Applicants further claim an adsorbent comprising a honeycomb structure coated with a heat resistant oxide loaded with a noble metal.

The translation of Hei 2-56247 teaches a composition for automobile exhaust gas treatment comprising a zeolite and a heat resistant oxide in the form of alumina. The abstract also discloses that a noble metal in the form of Pt is loaded on alumina. For example, see page 3, lines 7-13. The translation of Hei 2-56247 also discloses that the support is honeycomb shaped. In addition, the support is coated with a heat resistant oxide in the form of alumina. For example, see page 3, lines 6-7.

Art Unit: 1764

The translation of Hei 2-56247 succeeds in teaching applicants' claimed zeolite component and heat resistant oxide component, other than zeolite, loaded with a noble metal in the form of alumina loaded with Pt. Furthermore, translation of Hei 2-56247 also succeeds in teaching applicants' honeycomb shaped support.

Several differences are noted between the applied art of the translation of Hei 2-56247 and applicants' claimed invention. The translation of Hei 2-56247 is silent about the Si/Al ratio in the zeolite. Furthermore, the translation of Hei 2-56247 is silent about the specific structure of the honeycomb.

The reference of Inoue et al.(5,223,236) teaches the use of high silica zeolite with a silica/alumina ratio of greater than 20 for exhaust gas conversion. See column 1, lines 53-56 and column 2, lines 7-10.

Since the translation of Hei 2-56247 does not limit the silica/alumina ratio of the zeolite, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select any silica/alumina ratio greater than 20 (e.g. a ratio of 40) because the reference of Inoue et al.(5,223,236) teaches that any silica ratio greater than 20 is desirable for exhaust gas treatment. Applicants have not shown anything unexpected with respect to the claimed silica/alumina ratio.

Furthermore, applicants' limitations directed at the specific shape of the honeycomb composition are not considered to be patentable distinctions because such shapes are conventional in the art.

Art Unit: 1764

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nadine Preisch whose telephone number is (703) 305-2667. The examiner can normally be reached on Monday through Thursday from 7:30 am to 6:00 pm.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

August 5, 1999

N.P.

*NP*

*Walter D. Griffin*  
Walter D. Griffin  
Primary Examiner